

FIRST RECORD OF THE GENUS ETHOPIA WALKER FROM CHINA, WITH DESCRIPTIONS OF TWO NEW SPECIES (LEPIDOPTERA, PYRALIDAE, GALLERIINAE)

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Abstract The present paper reports of the genus *Ethopia* Walker for the first time from China. Two species, *E. crataegana* Song et Wu, sp. nov. from Guangxi and *E. flavibunnea* Song et Wu, sp. nov. from Hainan, Fujian and Yunnan are described and illustrated. A key to all known species of the genus is provided.

Key words Lepidoptera, Pyralidae, Galleriinae, *Ethopia*, new species, China.

The genus *Ethopia* was erected by Walker in 1864, based on the monotype *E. roseilinea* Walker from New Guinea. Owada (1986) described the second species, *E. gigantea* from the Philippines. In this paper, the genus *Ethopia* Walker is reported for the first time from China, with two species described as new to science. The type specimens of the new species are deposited in the Institute of Zoology, Chinese Academy of Sciences, Beijing, China.

Ethopia Walker, 1864 New record to China

Ethopia Walker, 1964. *List Specimens Lepid. Ins. Coll. Br. Mus.*, 31: 233.

Type species *Ethopia roseilinea* Walker, 1864.

Proboscis fully developed; palpi of male short, upturned, thickly scaled, that of female obliquely upturned, the second joint reaching to about middle of frons, the third joint long, smoothly scaled; maxillary palpi tiny; frons with hair tuft; antennae short, simple; male with large protrusile genital tuft. Forewing narrow, costa highly arched throughout in female, only arched toward apex in male, apex rounded, temen obliquely curved, inner margin somewhat excised towards tornus; male with vein Cu₁ from just before lower angle of cell; M₃ from angle with a recurrent vein running back to middle of subcostal nervure; vein M₂ from middle of cell from the almost obsolete discocellulars which are strongly angled inwards above it; M₁ from upper angle of cell; R₃₊₄ and R₅ stalked; R₁, R₂ from cell; the cell on underside covered with silky hair; female with veins M₂, M₃ from lower angle of cell and discocellulars strongly angled inwards. Hindwing with veins Cu₁ and M₂ from lower angle of cell, M₃ absent; discocellulars angled inwards toward base; M₁, R₅ strongly stalked and anastomosing with Sc + R₁; male with fringe of long down turned hair on upper side from beyond upper angle

of cell.

Distribution. New Guinea, Philippines, China.

Key to the species of the *Ethopia*

- | | |
|---|--|
| 1. Forewing with veins red or pink | 2 |
| Forewing with veins brown or black | 3 |
| 2. Forewing with veins red, with two red dots in the cell of male | |
| | <i>E. roseilinea</i> |
| Forewing with veins pink, with three black dots in the cell of male .. | |
| | <i>E. gigantea</i> |
| 3. Forewing with ground colour yellow brown; eighth sternite of male with anterior margin process acute | |
| | <i>E. flavibunnea</i> Song et Wu, sp. nov. |
| Forewing with ground colour purple brown; eighth sternite of male with anterior margin process blunt | |
| | <i>E. crataegana</i> Song et Wu, sp. nov. |

1 *Ethopia crataegana* Song et Wu, sp. nov. (Figs. 1-2, 4-6)

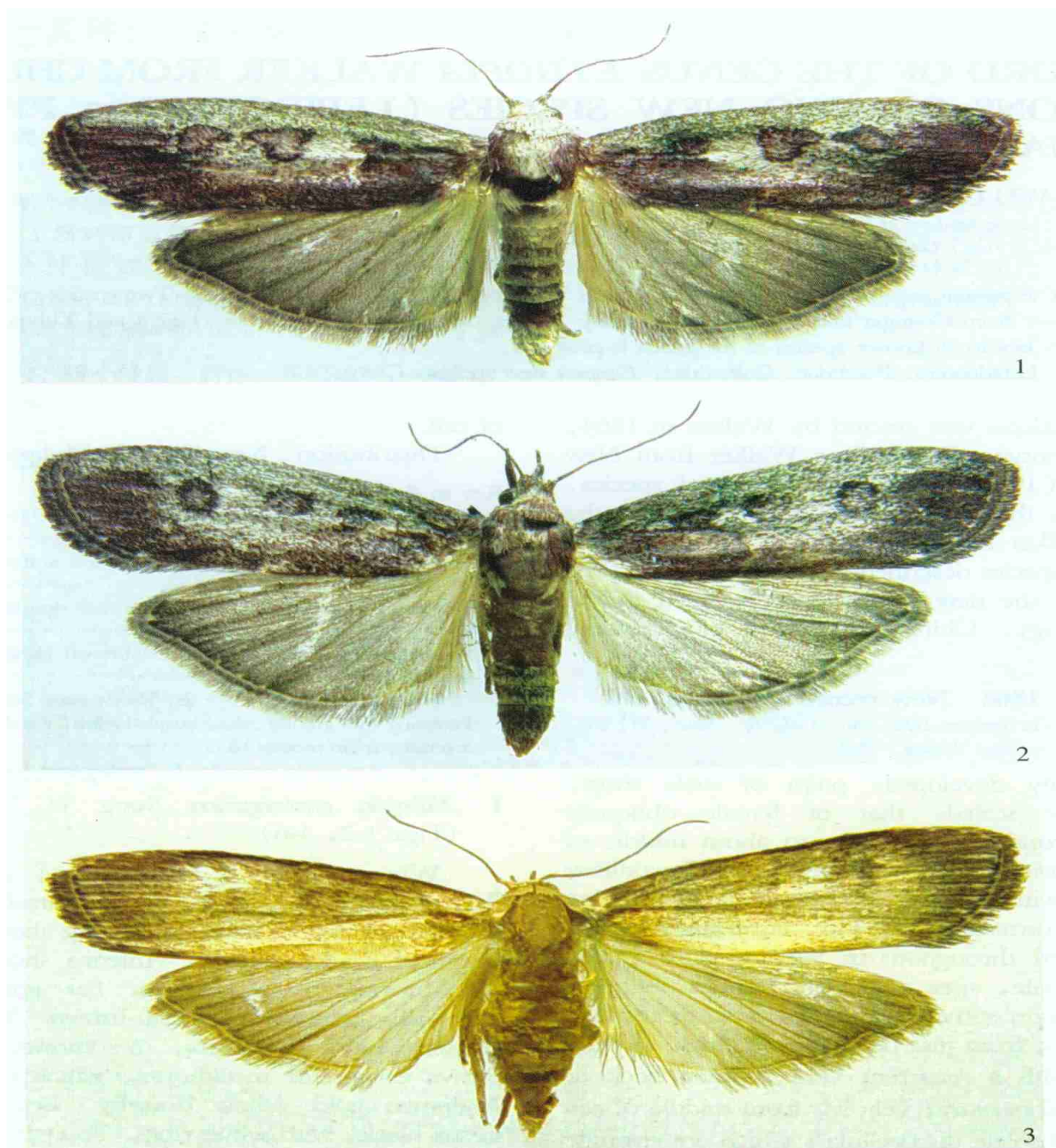
Wing expanse: ♂ 23-32 mm, ♀ 29-35 mm. Frons flat, oblique, with large hair tuft dorsally. Labial palpus short, upturned in male, projecting about three times the length of head in female. Antenna short, red-brown to black-brown; basal segment flat and broad. Head yellowish brown to blackish brown. Vertex and collar greyish white. Prothorax, mesothorax and tegula red brown except for metathorax, which is black dorsally. Abdomen gold yellow dorsally. Leg blackish brown, tarsus black, with white rings. Forewing narrow, purple brown; vein yellowish brown; costa highly arched, greyish green; cell greyish white, with three dark brown irregularly shaped spots; terminal lines blackish brown, with a row of small white dots; cilia purple brown. Hind wing greyish brown, apex and temen brown; cilia yellowish brown.

Male genitalia. Uncus broad, apex rounded, slightly constricted at middle, dorsally with a series of fine spines. Tegumen rather narrow. Vinculum well developed, V-shaped. Valva rather broad, simple, costa

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Figs. 1-3. Adults. 1. *E. crataegma* sp. nov. (♂) 2. *E. crataegma* sp. nov. (♀) 3. *E. flavibrunnea* sp. nov. (♀)

strongly arcuate. Juxta broad, rounded, medially concave on posterior margin. Aedeagus with two rows of spine-like posterior cornuti. Eighth sternite (Fig. 5b) with process on anterior margin blunt, middle of posterior margin exceedingly concave.

Female genitalia. Anal papillae large and broad. Anterior apophyses slightly shorter than posterior apophyses. Ostium bursae wide, U-shaped. Ductus bursae long and narrow. Corpus bursae somewhat oblong, with single striped signum. Eighth sternite triangular, slightly sclerotized.

Holotype ♂, China, Tian'e xian (25.0° N, 107.1° E), Guangxi, 14 Apr. 2006, collected by YANG Zai-Hao (IOZ (E) 202501). Paratypes: 6 ♂♂, 21 ♀♀, 30 Sep. 1996; 4 ♂♂, 21 Oct. 1996; 2 ♂♂, 2 ♀♀, 17 Apr. 2006; 1 ♀, 24 Apr. 2006; 2 ♂♂, 6 ♀♀, 29 Apr. 2006, locality and collector ditto (IOZ (E) 201502-IOZ (E) 201536, IOZ (E) 212794-IOZ (E) 212802).

Biology. The larvae bore in fruit of *Crataegus pinnatifida*. There are 4-5 generations each year. The rate of injured fruits reached about 40%-60%.

Remarks. This new species is similar to *E. gigantea* Owada, but can be easily distinguished from the latter by the following characters: forewing with vein yellowish brown and cell with three dark brown dots in both male and female; aedeagus with two rows of spine-like apical comuti in male and corpus bursae oblong in female; eighth sternite of male with anterior margin process blunt. In *E. gigantea*, the forewing has pink vein and cell with three black dots in male and two in female; aedeagus cylindrical, without comutus in male; corpus bursae nearly circular in female; eighth sternite of male with anterior margin process truncate.

Etymology. The specific name is derived from the genus name of the host plant (*Gataegus pinnatifida*).

2 *Ethopia flavibrunnea* Song et Wu, sp. nov.
(Figs. 3, 7-8)

Wing expanse: ♂ 22-24 mm. ♀ 26-34 mm. Frons, antenna, head and thorax red brown, vertex of head greyish white. Labial palpus red brown, short and upturned in male, projecting about three times length of head in female. Tegula red brown. Abdomen and leg fulv-ochrous. Ground color of forewing yellowish brown, scattered with ochrous scales; cell greyish white, with three annular spots; terminal fascia blackish brown, with a row of small white spots. Hindwing flavidus brown, apex and terminal area pale brown; cilia pale brown.

Male genitalia. Uncus moderate, broad, triangular, pointed apically, constricted at middle, dorsally with a series of fine spines. Valva rather narrow, costa strongly arched. Juxta broad, rounded, apex concave. Aedeagus with two posterior comuti. Eighth sternite (Fig. 7b) with anterior margin process short, pointed, middle of posterior margin invaginate.

Female genitalia. Anal papillae rather small.

Posterior apophyses slightly longer than anterior apophyses. Ostium bursae wide, U shaped. Ductus bursae long and narrow. Corpus bursae somewhat oval shaped, with single striped signum. Eighth sternite triangular, sclerotized.

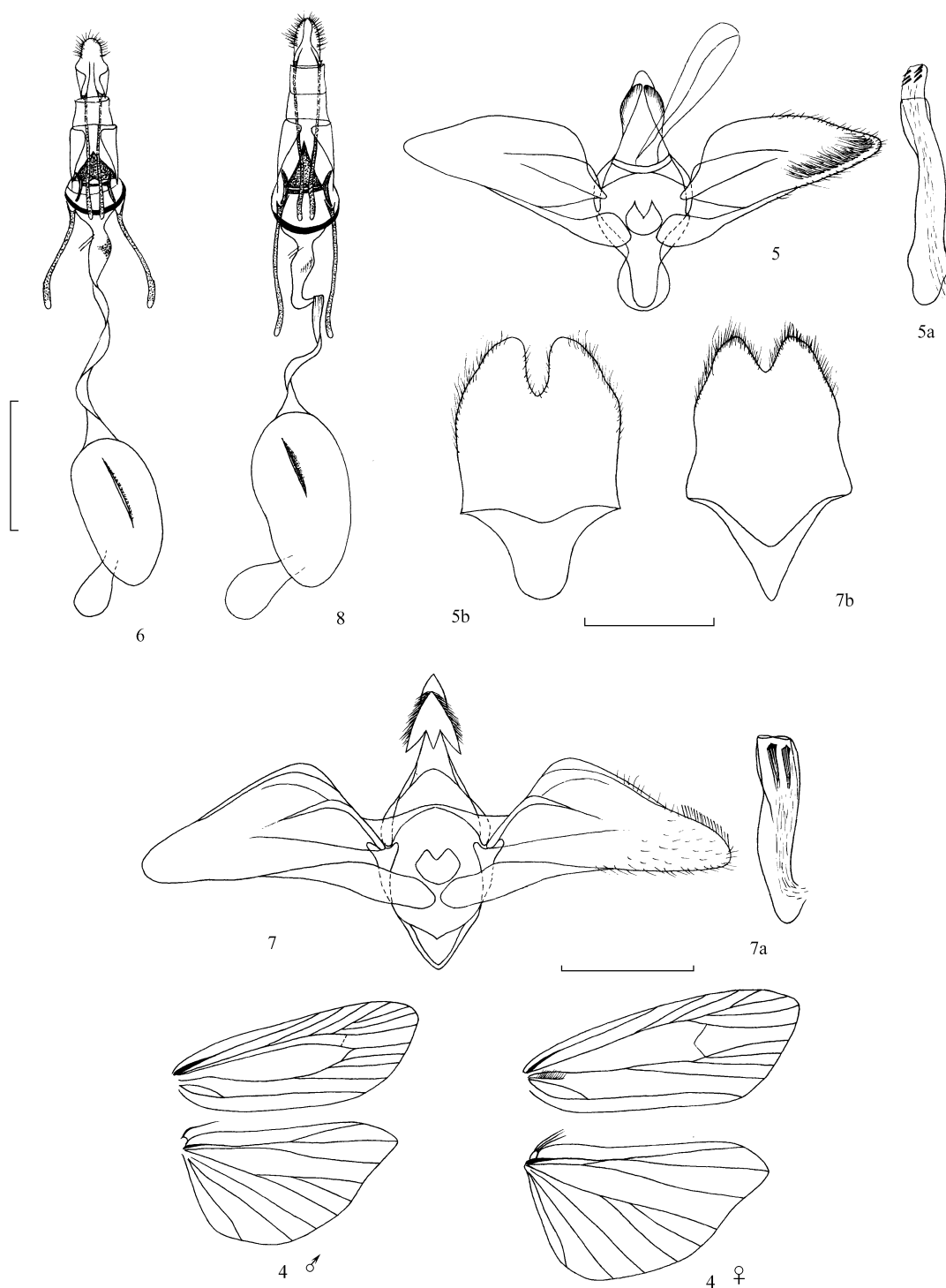
Holotype ♀, China, Diaoluoshan (18.4° N, 110.0° E), Hainan Province, 6 May 1982, collected by SONG Shi Mei (IOZ (E) 212803). Paratypes: 2 ♂ & 1 ♀, same data as holotype (IOZ (E) 212804 IOZ (E) 212806); 2 ♀ ♀, China, Jianfengling (18.7° N, 108.8° E), Hainan Province, 24 Sept. 1981, 31 May 1982, collected by LIU Yuan-Fu (IOZ (E) 212807 IOZ (E) 212808); 1 ♀, Limushan (19.0° N, 109.4° E), Hainan Province, 26 May 1984, collector ditto (IOZ (E) 212809); 1 ♀, Jiangle (26.7° N, 117.4° E), Fujian Province, 10 Sept. 1990, collected by YANG Bin (IOZ (E) 212810); 1 ♀, Wuyishan, Sangang (26.4° N, 116.4° E), 1 July 1982, collected by ZHANG Ke-Chi (IOZ (E) 212811); 1 ♀, Menglun County (21.9° N, 101.2° E), Yunnan Province, 23 Apr. 1982, collected by WANG Lin Yao (IOZ (E) 212812).

Biology. Unknown.

Remarks. This new species is similar to *E. crataeganae* sp. nov., but differs from the latter by the following characters: 1) forewing yellowish brown; 2) valva costa strongly arched; 3) eighth sternite with median process acute on posterior margin.

Etymology. The specific name is derived from yellowish brown color of the wings.

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Figs 4-9. Venation and genitalia (a. aedeagus; b. 8th sternite) of *Ethopia*. 4. Venation, *E. crataegana* sp. nov. ♂. 5. Genitalia. 5. *E. crataegana* sp. nov. (♂). 6. *E. crataegana* sp. nov. (♀). 7. *E. flavibrunnea* sp. nov. (♂). 8. *E. flavibrunnea* sp. nov. (♀). Scale bars= 1 mm.

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果蝇属在中国首次记录及二新种记述（鳞翅目，螟蛾科）

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摘 要 果蝇属 *Ethopia* Walker 世界已记载 2 种，分布在新几内亚和菲律宾，中国过去没有记录。本文记述了采自我国广西天峨县的山楂果蝇 *E. crataegana* Song et Wu, sp. nov. 和采自海南岛、福建、云南等地的黄褐果蝇 *E. flavibrunnea* Song et Wu, sp. nov.，并给出了成虫照片、形态特征图和本属已知种的检索表。新种模式标本保存在中国科学院动物研究所。

山楂果蝇 *Ethopia crataegana* Song et Wu, sp. nov. (图 1~ 2, 4~ 6)
分布于广西天峨县。新种与硕大果蝇 *E. gigantea* Owada (产自菲律宾) 近似，但前翅翅脉黄褐色，雌、雄性前翅中室内均有 3 个暗褐色不规则形斑；雄性第 8 腹板前缘突顶端

关键词 鳞翅目，螟蛾科，蜡螟亚科，果蝇属，新种，中国。
中图分类号 Q969. 432. 8

钝圆；交配囊长椭圆形。后者前翅翅脉粉红色，雄性前翅中室内有 3 个黑色斑纹，雌性有 2 个褐色斑纹；第 8 腹板前缘突顶端平截；交配囊接近圆形。

该种幼虫取食山楂果实，果实的受害率在 40% ~ 60%。一年发生 4~ 5 代。

黄褐果蝇 *Ethopia flavibrunnea* Song et Wu, sp. nov. (图 3, 7 ~ 8)

分布于海南岛（吊罗山、尖峰岭、黎母山）、福建（将乐、武夷山）和云南（西双版纳）。新种与山楂果蝇近似，但不同的是：成虫体色黄褐色；抱器瓣前缘中部强烈拱起；角状器为 2 棒状；雄性第 8 腹板前缘突顶端钝尖；交配囊椭圆形。